



Current Claims for
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(9000-0030.10)

1. (Amended) An isolated nucleic acid molecule consisting of a coding sequence for an immunogenic *Streptococcus uberis* CAMP factor, wherein the coding sequence is selected from the group consisting of: (a) a sequence encoding an amino acid sequence having at least about 90% identity to the amino acid sequence shown at positions 1 through 256, inclusive, of Figures 4A-4C (SEQ ID NO:2); (b) a sequence encoding an amino acid sequence having at least about 90% identity to the amino acid sequence shown at positions 29 through 256, inclusive, of Figures 4A-4C (SEQ ID NO:2); and (c) immunogenic fragments of (a) or (b) comprising at least 10 contiguous amino acids thereof.

2. (Twice amended) The nucleic acid molecule of claim 1 wherein said coding sequence encodes an amino acid sequence having at least about 90% identity to the amino acid sequence shown at positions 1 through 256, inclusive, of Figures 4A-4C (SEQ ID NO:2).

3. (Twice amended) The nucleic acid molecule of claim 1 wherein said coding sequence encodes an amino acid sequence having at least about 90% identity to the amino acid sequence shown at positions 29 through 256, inclusive, of Figures 4A-4C (SEQ ID NO:2).

4. (Amended) A recombinant vector comprising:
(a) a nucleic acid molecule comprising a coding sequence for an immunogenic *Streptococcus uberis* CAMP factor, wherein the coding sequence is selected from the group consisting of: (a) a sequence encoding an amino acid sequence having at least about 90% identity to the amino acid sequence shown at positions 1 through 256, inclusive, of Figures 4A-4C (SEQ ID NO:2); (b) a sequence encoding an amino acid sequence having at least about 90% identity to the amino acid sequence shown at positions 29 through 256, inclusive, of Figures 4A-

(b) control elements that are operably linked to said nucleic acid molecule whereby said coding sequence can be transcribed and translated in a host cell, and at least one of said control elements is heterologous to said coding sequence.

5. (Amended) A recombinant vector according to claim 4, wherein said nucleic acid molecule comprises a coding sequence encoding an amino acid sequence having at least about 90% identity to the amino acid sequence shown at positions 1 through 256, inclusive, of Figures 4A-4C (SEQ ID NO:2).

6. (Amended) A recombinant vector according to claim 4, wherein said nucleic acid molecule comprises a coding sequence encoding an amino acid sequence having at least about 90% identity to the amino acid sequence shown at positions 29 through 256, inclusive, of Figures 4A-4C (SEQ ID NO:2).

7. A host cell transformed with the recombinant vector of claim 4.

8. A host cell transformed with the recombinant vector of claim 5.

9. A host cell transformed with the recombinant vector of claim 6.

10. A method of producing a recombinant CAMP factor comprising:

- (a) providing a population of host cells according to claim 7; and
- (b) culturing said population of cells under conditions whereby the CAMP factor encoded by the coding sequence present in said recombinant vector is expressed.

11. A method of producing a recombinant CAMP factor comprising:

- (a) providing a population of host cells according to claim 8; and
- (b) culturing said population of cells under conditions whereby the CAMP factor encoded

12. A method of producing a recombinant CAMP factor comprising:
- (a) providing a population of host cells according to claim 9; and
 - (b) culturing said population of cells under conditions whereby the CAMP factor encoded by the coding sequence present in said recombinant vector is expressed.